

Remarks/Arguments:

Reconsideration and allowance of the above-identified application is respectfully requested. This amendment adds no new claims, and is provided to amend claims 1 and 9. No new matter has been added. Upon entry of this amendment, claims 1-16 will be pending.

Objections to the Specification

The Examiner has objected to the specification at paragraph 20 as lacking clarity regarding the element descriptions of Equation (1). For simplicity, all citations to the specification will refer to the paragraph numbers used in the application's Patent Application Publication, US 2004/0160360A1.

Specifically, the Examiner states that the variables x_p and y_p are positions and not velocities, and points to the following equations in the document entitled "Understanding GPS: Principles and Applications", by Elliot D. Kaplan, and similar equations in the document entitled "Global Positioning System: Theory and Applications" by Bradford Parkinson. The equations are:

$$x_p = r_k \cos u_k \text{ (to define In-plane x position); and}$$
$$y_p = r_k \sin u_k \text{ (to define In-plane y position).}$$

Accordingly, the Applicant has amended paragraph 20 of the specification along the lines suggested by the Examiner. Therefore, the Applicant respectfully requests the withdrawal of the objection to the specification.

Rejections of the Claims under 35 U.S.C. 112, First Paragraph

The Examiner has rejected claims 1-16 under 35 U.S.C. 112, first paragraph as failing to comply with the enablement requirement. The Examiner states that the definition of "pseudo velocity" is defined in the application in contradicting sections, including a first definition that takes into account the relative velocity between the

satellite and the mobile station (MS), and in a second definition that does not take into account the velocity of the mobile station (MS). The Applicants assert that the Examiner has incorrectly combined the calculations used to determine satellite velocity (as determined by the satellite velocity calculator), with the calculations used to determine satellite pseudo velocity (as determined by the pseudo velocity calculator).

The Applicants point the Examiners attention to the flow chart of FIG. 9, which specifies that the satellite velocity is determined using Equation 15 at step 915 (without regard to the velocity of the MS, but realizing a signal propagation delay occurs between the satellite and the MS) (see paragraph 105). The Applicants further point out that the pseudo velocity is determined using Equations 19 and 20 at step 920 (with regard to the velocity of the MS, that is, Equations 19 and 20 consider only a velocity component directed to the MS, or specifically, to the reference station) (see paragraph 106). This definition further conforms with paragraph 40.

Therefore, the Applicant respectfully requests the withdrawal of the rejection of independent claims 1 and 9, and respectfully requests the withdrawal of the rejection of dependent claims 2-8 and 10-16, which are dependent from the amended claims 1 and 9, respectively.

The Examiner further states that the propagation delay term, $Error|T_c$ is described generally as caused by a variety of factors, and that it is not shown how these factors are determined. A propagation delay is determined by a distance between satellite and receiver, and propagation velocity, and it is well-known to those skilled in the art that the propagation delay can be changed according to a characteristic of the atmosphere between the satellite and the ground. Furthermore, in paragraph 78 of the application, since $Error|T_c$ is deleted in the process of combining two equations of Equation (12) on the assumption that $Error|T_c$ and $Error|T_a$ are the same, it can be seen that $Error|T_c$ is not an important element in the embodiments of the present invention.

Rejections of the Claims under 35 U.S.C. 112, Second Paragraph

The Examiner has rejected claims 1-16 under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. The Examiner states that it is not specified as to what the pseudo range is measured relative to, that is, is the pseudo range measured between satellites and the mobile station, or is the pseudo range measured between the satellites and the base station. The Examiner further states that it is not specified as to what the satellite velocities are being measured relative to, that is, are the satellite velocities measured relative to the mobile station, base station, or the ECEF coordinate system.

Accordingly, the Applicants have amended independent claims 1 and 9 to clarify the determination of pseudo range and satellite velocity. Specifically, the Applicants have amended claims 1 and 9 to clarify that the pseudo range is determined between the satellite and at least one of the mobile station and the base station, and that the velocity of the satellite is relative to the ECEF coordinate system.

Allowable Subject Matter and Conclusion

The Examiner is thanked for the allowable subject matter of claims 1-16. Further, in view of the above, it is believed that the application is in condition for allowance and notice to this effect is respectfully requested. Should the Examiner have any questions, the Examiner is invited to contact the undersigned attorney at the telephone number indicated below.

Respectfully submitted,



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